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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,981	08/06/2001	Michael Braithwaite	IRID-0404	1436

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EXAMINER

BUGG, GEORGE A

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 03/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/922,981

Applicant(s)

BRAITHWAITE ET AL.

Examiner

George A Bugg

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 33-43 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-10, 12-17, 26-30 and 32 is/are rejected.
- 7) ☒ Claim(s) 6, 11, 18-25, and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Applicant's Response, filed 1/21/04, with respect to claims rejection under 35 U.S.C. 112 first paragraph have been fully considered and are persuasive. The rejection of claims 2, 5, 7, 11, 12, 23-25, 28, 31, and 34-38 has been withdrawn.
2. Applicant's arguments filed 1/21/04 have been fully considered but they are not persuasive. The rejection is maintained by the Examiner explanation to follow.
3. Applicant argues that the Watanabe reference does not teach or suggest first and second illuminators each positioned outboard of the opposing lens system. Once again the Examiner must point out what is shown in Figures 3 and 6. Again the system shown in Figure 6 would be doubled, one for each of a right and left eye. Furthermore, Figure 6 clearly shows the illuminator 97 to be outboard or offset in the Y direction from the lens 93. Moreover, illuminator 97 would be to the right of the left eye system shown in Figure 6, and conversely illuminator 97 would be to the left of the right eye system shown in Figure 6. In either case the illuminator 97 is clearly outboard of the lens 93. It should also be noted, that for the reasons stated above, Applicant's arguments regarding motivation of Watanabe and Stephenson due to Watanabe teaching away from the angle of separation between the illuminator and lens are also dismissed.

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Based on what is shown in Figure 6, and stated in Column 6, lines 29-45, the Examiner must disagree with Applicant and maintain his rejection. Furthermore, this cited passage, in conjunction with Figure 6 in no way teaches or states that the illuminator 97 is directly in front of the eyeball 91. It may be in a forward direction, but it is clearly not on the same X-axis as the eyeball, or the lens 93.

DETAILED ACTION

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 7-10, 12-17, and 26, are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. US 2001/0028730 A1 to Nahata, in view of US Patent No. 5,717,776 to Watanabe.

6. As for claim 1, the Nahata reference discloses (Section 47) an iris recognition processing unit, depicted as Element 30, of Figure 2, which performs iris recognition based on an eye image captured by the image capture unit, shown as 21. In addition, Figure 1C shows an expanded capture volume based on varying lens types. Figure 1A shows Elements 131 and 132 as a narrow view angle lens and a cylinder lens,

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respectively. These two lenses constitute first and second lens systems, as claimed.

Referring to Figure 2, these lens systems are part of a multiple view angle camera, shown as Element 11, which is coupled to Element 21, or the image capture unit.

Furthermore, as can be seen in Figure 1A, Elements 131 and 132 are offset from one another in one of the X, Y, or Z-axis directions. The limitations involving illuminators cannot be found in the Nahata reference, however the Watanabe reference clearly shows an illumination means, as Element 97, in Figure 6. The eye scan system, shown in Figure 6, is part of the eyesight test machine, depicted as Element 25 of Figure 3. As can be seen in Figure 3, and further described in col. 6, lines 25-49, Element 25 is used to test the eyes of a license renewer, while scanning the eyes simultaneously. It is the contention of the Examiner, that even though Figure 6 only shows one eye being scanned, that since both eyes are tested for vision loss, it would be obvious to scan both eyes, since each eye is tested. Therefore, the system shown in Figure 6 would be doubled, one system for each eye, and thus there are two illuminators, each one positioned outboard of both lens systems, being separated by an X, Y, or Z direction, each one illuminating an eye, while the first illuminator works with the first lens system, and the second illuminator works with second lens system. Therefore it would have been obvious to one of ordinary skill in the art of optics to combine the teaching of Nahata and Watanabe for the purpose of accurate identification. Moreover it should be noted that using light sources in optical systems is well known in the art.

7. As for claim 2, Figure 1C, of the Nahata reference shows an expanded volume capture in Element 141b.

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8. As for claim 3, referring to Figures 3 and 6, Element 25 of Figure 3, shows the eyepieces of the eye tester being separated by a known distance, which is equal to an average eye separation. The lens systems of Figure 6 would in fact be separated horizontally, or offset in an X-axis direction, a known distance, which corresponds to the separation of the eyepieces of Element 25, in Figure 3. Furthermore, the illuminators and their perspective lens system would also be separated by a known X-axis distance, while being positioned relative to one another.

9. Regarding claim 4, Figure 6 shows a lens system on axis with its perspective eye while positioned in front of the scanner.

10. With regard to claim 5, Figure 1C, of the Nahata reference shows an expanded volume capture in Element 141b, which includes expansion in the X direction.

Furthermore, as previously stated, the system shown in Figure 6 of the Watanabe reference, would be doubled, one system for each eye, and thus there are two illuminators, each one positioned outboard of both lens systems.

11. As for claims 7-10 Figure 1C of Nahata shows an expanded capture volume, wherein the lens systems of Figure 1A are offset in the Z-axis direction. Furthermore, lens 131 is disclosed as a narrow view lens, while lens 132 is disclosed as a cylinder lens, which will optically offset one each lens system in the Z-direction from one another. In addition, each lens would have a different prescription based on the definition of its functionality.

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12. Regarding claim 12, it has been shown by the references cited that heights, widths, and depths of capture volumes can be manipulated by offsetting right and left lens systems in a corresponding X, Y, or Z direction.

13. As for claims 13-15, Section 43 of the Nahata reference discloses a pan-tilt mechanism of the camera, which is depicted as Element 11, of Figure 2, and encompasses the lens systems 131 and 132, shown in Figure 1. In addition, Section 41 discloses iris recognition using an automatic camera system. The word automatic implies auto focus.

14. With regard to claims 16 and 17, Element 25 of Figure 3, shows the eyepieces of the eye tester being separated by a known distance, which is equal to an average eye separation. A user must be positioned properly in front of Element 25, with respect to X, Y, and Z coordinates in order to insure proper user recognition. In addition, Element 23 is disclosed as a CRT display, which is a visual indicator, while Element 28 of Figure 2 discloses an audio guide unit.

15. As for claim 26, Section 46 of Nahata discloses the use of a wide view photograph, captured by camera 11, wherein the pan and tilt are controlled by an output signal from the camera. See Figure 2.

16. Claims 27-30, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,717,776 to Watanabe, in view of US Patent No. 5,475,460 to Stephenson et al.

17. As for claim 27, Figure 6 of Watanabe shows one lens system for one eye, and a sensor (Element 94) for capturing an image of an object behind a light transmissive

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structure. A single illumination means, separated from the lens system, is shown as Element 97. Further shown is a separation distance between the eye, or object to be imaged, and the lens system. Watanabe fails to teach the limitations involving an angular separation, between a lens system axis, and an illumination axis, however, the Stephenson reference discloses, in column 6, lines 29-56, that highlights, or specular reflections, can be eliminated if the angle of separation between an illuminating axis and a lens axis are separated by an angle greater than 8.5 degrees. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Watanabe and Stephenson for the purpose of reducing glare, as well as image abnormalities.

18. As for claim 28, Stephenson shows an angle of separation greater than 8.5 degrees.

19. With regard to claims 29 and 30, the creation of the lens system axis and the illumination axis, as well as manipulating distances between systems, to ensure a minimum angular separation, are obvious embodiments. Furthermore, Figure 1, of Stephenson, clearly shows that these limitations are met.

20. As for claim 32, both Figure 1 of Stephenson, and Figure 6, of Watanabe disclose the limitations of this claim.

Allowable Subject Matter

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21. Claims 6, 11, 18-25, and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
22. Claims 33-43 are allowed.

Conclusion

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George A Bugg whose telephone number is (703) 305-2329. The examiner can normally be reached on Monday-Thursday 7:30 - 6:00.

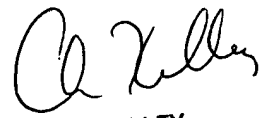
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

George A Bugg
Examiner
Art Unit 2613

GAB

March 19, 2004


CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
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